

DEPARTMENT OF THE ARMY

applying heat and pressure from a molding machine to an uncured layered stack including a first surface layer and a second surface layer, both of uncured molding material and having similar outlines, enclosing therebetween a core layer of sound-damping material of smaller outline, thus defining a peripheral margin of direct interface between the first and second surface layers, the pressure being made such as to press the first and second surface layers together in interfacing contact in the peripheral margin, and the heat being made such as to cause the first and second surface layers to become cured and bonded together in the peripheral margin, thus embedding the core layer between the first and second surface layers.

(1) preparing the first and second surface layers to have the desired similar overall outlines;

(2) preparing the core layer of sound-damping material to have a desired outline smaller than the overall outlines;

(3) laying the first surface layer into the molding machine;

(4) laying the core layer onto the first layer, positioned so as to define the peripheral margin of uncured molding material; and

(5) laying the second surface layer on the core layer and the first surface layer, substantially in outline registration with the first surface layer, preparatory to applying heat and pressure as in claim 1,

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reinforcement.

4. The method of embedding sound-damping material in loudspeaker components as defined in claim 1 wherein the sound-damping material is selected from a group of sound-damping materials including a filled vinyl copolymer compound and a filled silicon rubber compound.

5. The method of embedding sound-damping material in loudspeaker components as define in claim 2, further comprising in step 4, the additional substep of:

(4a) laying additional amounts of uncured molding material as required in the peripheral margin.

6. A loudspeaker component having a panel-like region, which may include flat and curved portions, structured with hard surfaces of molding material and containing an embedded core of sound-damping material, comprising:

a first surface layer of molding material made to have a predetermined boundary outline;

a core layer of sound-damping material made to have a predetermined outline smaller than that of said first layer so as to form a peripheral margin of molding material; and

a second surface layer of molding material, having an outline similar to that of said first layer and located in substantial registration therewith, bonded to said first layer in the peripheral margin so as to form a sealed core region containing said core layer.

7. The loudspeaker component as defined in claim 6 wherein the molding material is a commercially available thermosetting resin with fiberglass reinforcement.

8. The loudspeaker component as defined in claim 6 wherein said core material is selected from a group of sound-damping materials including a filled vinyl copolymer compound and a filled silicon rubber compound.